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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,550	07/17/2000	Tetsuo Taniguchi	194378US2CONT	9489

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ALEXANDRIA, VA 22314

EXAMINER

NGUYEN, HUNG

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 08/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/618,550

Applicant(s)

TANIGUCHI

Examiner

Hung Henry V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed May 29, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,8-10,13,14,26-43,46 and 49-59 is/are pending in the application.
- 4a) Of the above claim(s) 26-42 and 49-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,8-10,13,14,43,46 and 52-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections-35 USC 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 52-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 52, the recitation of “wherein said first exposure apparatus roughly corrects one image distortion component and finely corrects another image distortion component, based on the image distortion correction capability of the second exposure apparatus” is vague and not clearly understood.

As to claim 53, the recitation of “wherein said first exposure apparatus roughly corrects the one image distortion component which can be finely corrected by the second exposure apparatus” is ambiguous and not clearly understood. In the above claims, the recitation of the term “roughly, finely ” render the claims indefinite. That is, when a term of degree is used as a limitation, it is necessary to determine whether the specification provides some standard for measuring that degree. In this case, the specification does not enable one skilled in the art to reasonably establish what may be construed as being within the metes and bounds of the term of degree. Therefore, one of ordinary skill in the art would not be apprised as to the claimed invention’s scope when the claims are read in light of the specification.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-5, 8-10, 13-14, 43, 46 and 52-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ushida et al (U.S.Pat. 4,734,746) in view of Nishi (U.S.Pat. 5,854,671).

With regard to claims 1, 3-5, 8-10, 13-14, 43, 46 and 52-59, Ushida et al (fig.1) discloses an exposure method and apparatus using a plurality of exposure apparatuses (A and B) for exposing patterns of a plurality of layers on a substrate (see col.6, lines 1-3) comprising substantially all basic steps of the instant claims such as: the data DS₂ regarding the distortion of the projection lens (PL2) of the exposure B is stored in the main control device (CNT2) and the distortion information is sent to the main control device (CNT1) or the main control device (CNT2) of the exposure B receives distortion data of the exposure A so that the image forming characteristic of a first/or second exposure apparatus is adjusted based on the stored image forming characteristic of a second/or first exposure apparatus (see col.6, lines 10-41; col.7, lines 1 through col.10, line 62). In the other words, Ushida teaches that an exposure method which comprises two exposure apparatuses in which "the image forming characteristics of a first exposure apparatus is adjusted and consideration of an image correction capability of a second apparatus" as claimed. Ushida does not expressly disclose the one of the exposure apparatuses being a scanning type exposure apparatus and the other being a batch type exposure apparatus.

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However, this in itself does not make any inventive step. Nishi teaches a batch type projection exposure apparatus being used with a scanning type exposure apparatus to perform "Mix and Match method" (see col.6, lines 5-30 and abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Ushida and Nishi to obtain the invention as specified in the above claims. It would have been obvious to employ one exposure apparatus being a scanning type exposure apparatus and the other being a stationary type exposure apparatus as suggested by Nishi into the device/method of Usuda so that "it is possible to make the most of the advantages of both the step and repeat method and the step and scan method fully" and improve the quality of the images to be printed.

5. Claims 1, 3-5, 8-10, 13-14, 43, 46 and 52-59 are rejected under 35 U.S.C. 102(e) as being unpatentable over Okamoto et al (U.S.Pat. 6,163,336) in view of Nishi (U.S.Pat. 5,854,671).

With regard to claims 1, 3-5, 8-10, 13-14, 43, 46 and 52-59, Okamoto et al (fig.1) discloses an exposure method and apparatus comprising substantially all of the basic features of the instant claims including the distortion data of each exposure unit has been known and stored in the memory of a main controller system (6). Accordingly, the image forming characteristic of one exposure apparatus in a plurality of exposure apparatuses is adjusted to expose one layer of the substrate based on the stored image distortion capability of another exposure apparatus (see abstract of Okamoto, for example). Okamoto lacks to show the one of the exposure apparatuses being a scanning type exposure apparatus and the other being a batch type exposure apparatus. Nishi teaches an exposure method in which a batch type projection exposure apparatus is used with a scanning type exposure apparatus to perform "Mix and Match method" (see col.6, lines 5-

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30 and abstract). In view of such teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Ushida and Nishi to obtain the invention as specified in the above claims. It would have been obvious to employ one exposure apparatus being a scanning type exposure apparatus and the other being a stationary type exposure apparatus as suggested by Nishi into the device/method of Okamoto so that "it is possible to make the most of the advantages of both the step and repeat method and the step and scan method fully" and improve the quality of the images to be printed.

Prior Art Made of Record

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shigematsu (U.S.Pat. 6,600,550) teaches a batch type projection exposure apparatus for being used with a scanning type exposure apparatus.

Response to Amendment

7. Applicant's amendments filed May 29, 2003 have been entered. Claims 1, 3, , 8-10, 13,-14 have been amended. Claims 2, 6-7, 11-12, 15-25, 44-45, 47-48 have been cancelled. New claims 52-59 have been added.

Applicant's arguments with respect to the prior art have been carefully reviewed but have been traversed in view of new grounds of rejections as set forth above.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 703-305-6462. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

hvn
July 30, 2003


HENRY HUNG NGUYEN
PRIMARY EXAMINER